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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/731,250	12/07/2000	Karl Schreiber	PM 0271049 RRD00XX0X	9064
7590	11/09/2005		EXAMINER	
Timothy J. Klima Harbin King & Klima 500 Ninth Street, SE Washington, DC 20003			NGUYEN, TRINH T	
			ART UNIT	PAPER NUMBER
			3644	

DATE MAILED: 11/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/731,250

Applicant(s)

SCHREIBER ET AL.

Examiner

Trinh T. Nguyen

Art Unit

3644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on RCE dated 10/27/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 5-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 5-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Continued Prosecution Application*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/27/05 has been entered.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, and 6-9, 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (as set forth under BACKGROUND OF THE INVENTION; hereinafter is referred to as AAPA) in view of Johnson (US5430346).

AAPA discloses that it is known to make a combustion chamber of a gas turbine engine by "casting in a highly temperature resistant nickel-base casting alloy" (see paragraph 2 of page 1 of the specification). AAPA further discloses that "the rings and the dome of the combustion chamber are usually joined by welding" (note that "the rings and the dome" can be interpreted as a plurality of individual wall sections, wherein these individual wall sections are annular/circular segments of the combustion chamber).

AAPA discloses most of the claimed invention except for indicating that the joining is done by laser welding.

Johnson teaches that it is old and well known to use conventional laser welding to weld cast nickel alloy structural members together (note that these cast nickel alloy structural members are parts of spark plugs which are subject to high heat stress like the individual cast wall sections as claimed). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of AAPA so as to include the use of laser welding, in a similar manner as taught in Johnson, in order to provide a more efficient joining method and thus reduce the overall manufacturing cost.

For claims 6 and 11, AAPA as modified by Johnson (emphasis on Johnson) further discloses whether the laser welding inputs low or high energy to the wall sections.

For claims 7 and 12, AAPA as modified by Johnson lacks to mention that the laser welding is performed with a diode laser. However, it would have been an obvious matter of design choice to one having ordinary skill in the art at the time the invention was made to have modified the method of AAPA as modified by Johnson so as to include the use of a diode laser, since applicant did not provide a reason and/or showing any criticality as to why the laser welding has to be specifically done by diode lasers. Furthermore, one of ordinary skill in the art would have expected applicant's invention to perform equally well with the laser as one taught by Johnson.

For claims 8 and 13, AAPA as modified by Johnson (emphasis on Johnson) further discloses the laser welding method provides a crack-free joint between the welded structural members.

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For claims 9, 14, and 15, AAPA as modified by Johnson lacks to mention that the use of specific material (namely C1023) for the highly-temperature resistant nickel-based casting alloy. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select such a material, since to do so would have been considered an obvious material selection and design preference depending on the cost and availability of a particular material, and it appears that the invention would perform equally well with the material as disclosed by the prior art.

4. Claims 5, 10, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Johnson (US5430346), and further in view of Gasse et al. (US5975407).

AAPA as modified by Johnson lacks to mention that the laser welding is performed without filler material.

Gasse et al. teach that it is old and well known to use conventional laser welding with or without filler metal. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of AAPA as modified by Johnson so as to include the use of laser welding technique with or without filler metal, in a similar manner as taught in Gasse et al., in order to provide a more efficient joining method and thus reduce the overall manufacturing cost.

***Response to Arguments***

5. Applicant's arguments with respect to claims 1,2, and 5-16 have been considered but are moot in view of the new ground(s) of rejection.

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***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trinh T. Nguyen whose telephone number is (571) 272-6906. The examiner can normally be reached on M-F (9:30 A.M to 6:00 P.M).

The examiner's supervisor, Teri Luu can be reached on (571) 272-7045. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Trinh T Nguyen  
Primary Examiner  
Art Unit 3644

11/3/05